UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
One Blackburn Drive
Gloucester, MA 01930-2298

-29-02P02:03 REF

OCT 17 2002

In Reply To:
OEP/DEER/Gas Branch 2
Millennium Pipeline Company, L.P.
Docket Nos. CP98-150-000, et al.
Columbia Gas Transmission Company
Docket No. CP98-151-000

Ms. Magalie R. Salas
Secretary
Federal Energy Regulatory Commission
888 First Street, NE, Room 1A
Washington, D.C. 20426

Re FERC's Response to Endangered Species Act and Magnuson-Stevens Fishery Conservation and Management Act Comments

Dear Secretary Salas

This letter responds to your correspondence dated September 25, 2002, from Lauren H. O'Donnell regarding our continuing coordination on the above referenced project pursuant to the Endangered Species Act (ESA) and the Magnuson-Stevens Fishery Conservation and Management Act (MSA). Your letter indicates that seven recommendations developed in the formal Section 7 consultation and four conservation recommendations made in response to the supplemental essential fish habitat (EFH) assessment have been incorporated as project requirements by the Federal Energy Regulatory Commission (FERC). Our review of the record does not fully support that conclusion. We request a modification to the order to address deficiencies and comply with the ESA. Outstanding environmental recommendations established for the project require additional filings and EFH coordination by FERC with respect to certain issues of concern to the National Marine Fisheries Service (NMFS).

ESA Comments:
In a letter dated September 6, 2002, NMFS provided FERC recommendations to avoid potential take of shortnose sturgeon during blasting operations. These recommendations were incorporated as project requirements in FERC's final order. FERC's interim order, which was issued prior to the final order, includes the project requirements for the dredging and pipelaying portion of the project. On September 14, 2001, NMFS issued a biological opinion (BO) on the impacts of FERC's issuance of a permit for the dredging and pipelaying portion of the project. The BO provided reasonable and prudent measures (RPMs) to minimize the impacts of incidental take of endangered shortnose sturgeon and non-discretionary terms and conditions to

implement the RPMs. The terms and conditions for the dredging and pipelaying portion of the project were included as project requirements in FERC's interim order, however, the RPMs were not included. The final order needs to be modified to include the RPMs to ensure that the impacts of the incidental take of endangered shortnose sturgeon are minimized.

MSA Comments:
FERC's letter acknowledges the incorporation of conditions in the final order representing the four EFH conservation recommendations we offered in response to FERC's supplemental EFH assessment for blasting activities relative to the Haverstraw Bay crossing alternative. These conservation recommendations were issued in letters to FERC on May 2, 2000, March 22, 2001, and September 6, 2002 (attached). As indicated in the O'Donnell letter, these conditions require continued coordination between FERC and NMFS as additional information is developed and filed by FERC for review, comment, and potentially additional consultation depending upon the conclusions of the information. In addition, we note that the final order and the final environmental impact statement, while making generic alternatives conclusions, do not include the focused discussion of EFH impacts that we requested, and FERC agreed to provide, for the Hudson River crossing alternatives.

Summary:
In light of your commitment to continued consultation with this agency, my staff will continue coordination with FERC personnel as the necessary information becomes available. It is my intention to use existing coordination procedures to address all pending ESA Section 7 and EFH issues among the appropriate staff representatives of FERC and NMFS. While we will proceed with respect to these issues, we note that we continue to be concerned about the aquatic impacts associated with the selected Hudson River crossing alternative.

We appreciate the efforts made by your staff at this point in our interagency coordination on this project. Should you have questions regarding these comments, please contact Ms. Jessica Anthony on ESA matters at 978-281-9254, and Ms. Diane Rusanowsky on EFH matters at 203-882-6504.

Sincerely,

Patricia A. Kurkul
Regional Administrator

Enclosures

cc: USACE - Buffalo, New York
NOAA/NOS
NOAA/NMFS - Milford
USF&WS
NYSDOS
NYSDEC - Albanv

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
One Blackburn Drive
Gloucester, MA 01930-2298

SEP - 6 2002

Ms. Magalie Roman Salas, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E., Room 1A
Washington, D.C. 20426

In Reply To:
OEP/DEER/Gas Branch 2
Millenium Pipeline Company, L.P.
Docket Nos. CP98-150-000 et al., and
Columbia Gas Transmission Company,
Docket No. CP98-151-000

Dear Secretary Salas:

This letter pertains to the National Marine Fisheries Service's (NMFS) ongoing consultations with the Federal Energy Regulatory Commission (FERC) pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, as amended, and Essential Fish Habitat (EFH) Section 305 (b) provisions of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), on a portion of the proposed Millennium Pipeline Project. Our comments conveyed in this letter reply to FERC's reinitiation of a Section 7 consultation for which you have prepared a supplemental biological assessment, and to EFH consultation for which you have prepared a supplemental EFH assessment. Both assessments address an additional project component of underwater blasting that will occur in a portion of the Haverstraw Bay Hudson River crossing alternative. Included in this correspondence are conservation recommendations to address incremental impacts associated with this newly introduced construction activity in accordance with our authorities mentioned above to protect living marine resources and habitat.

Revised Construction Plan

Project revisions discussed in FERC's supplemental assessments address the effects of underwater blasting within a segment of the pipeline corridor from the eastern shore to a point 185 feet offshore in Haverstraw Bay. Millennium has confirmed that consolidated rock will be encountered along an area 185 feet in length at the eastern most portion of the proposed route and has estimated that 260 cubic yards of rock will be removed to achieve the necessary trench depth. Millennium will initially attempt to remove the rock using an environmental dredge or barge mounted excavator. The FERC assessments indicate that blasting would not be undertaken until efforts to remove rock employing the above mechanical methods fail. Millennium expects that at least some of the consolidated material can be handled by mechanical means. FERC has determined that the operations of blasting and subsequent removal of rock material would not

destroy or affect the benthic community beyond the footprint discussed in the initial assessments, nor would the proposed construction schedule be altered by these activities.

Prior to blasting, soft material (referred to as overburden) would be removed as described above and stored in shallow water barges. Sidecasting would be prohibited. Turbidity impacts would be mediated by the use of the environmental bucket to remove sediment prior to excavation of rock with an open-bucket backhoe. The setback distance for removing rock and overburden would be determined in the field, depending on actual site conditions; however, the construction plan assures that the setback would not exceed the project corridor described in the original biological and EFH assessments for this crossing.

If possible, the blasting is to be accomplished by a single episode, with a maximum of 200 boreholes set 6-11 feet deep and spaced 3-5 feet apart. Charges would be set on delays with 1-2 holes and a maximum charge of 35 pounds per delay. Each bore would be stemmed with 3-7 feet of crushed stone placed in the borehole over the charges. Notwithstanding, the Vibra-Tech attachment indicates that more than one blasting episode may be necessary due to barge access limitations. To enhance the mitigation of blasting impacts, attempts to detect fish schools would be made prior to detonation, and noise-generating devices would be used to discourage fish from approaching the blast area. An air bubble curtain would be installed within the 96 hour 1% mortality distance based on the Coastline Environmental Service's I-Blast model (assuming a 35 pound high explosive charge and fish weighing between 0.25 and 15 pounds).

The pipe would be installed and the excavated trench will be backfilled to original elevations with the stockpiled rock and sediment consistent with activities proposed for the remainder of the Hudson River crossing. It would not be possible to restore the benthic habitat fully in the blasted area since the fractured bedrock could not be returned to its pre-construction condition.

NMFS Endangered Species Act Comments

On January 17, 2001, FERC submitted a biological assessment (BA) and requested initiation of formal consultation pursuant to section 7 of the ESA on the portion of the Millennium Pipeline Project proposed to traverse Haverstraw Bay in the Hudson River, New York. On April 4, 2001, NMFS requested additional information to supplement the BA. The information requested by NMFS was discussed in greater detail in a conference call on May 18, 2001. FERC submitted additional information to NMFS in a letter dated June 1, 2001. On June 7, 2001, the applicant, Millennium Pipeline Company (Millennium), visited NMFS' Northeast Regional Office and presented information on their project application. While this meeting did provide additional clarification and details on the project components, no new information was provided and NMFS concluded that June 1, 2001, was the date of initiation of formal consultation.

On June 15, 2001, NMFS informed FERC that all of the information necessary for a formal section 7 consultation and biological opinion (BO) had been received and reminded FERC not to make any irreversible or irretrievable commitment of resources that would prevent NMFS or FERC from implementing any reasonable and prudent alternatives to avoid jeopardizing shortnose sturgeon.

On September 14, 2001, NMFS issued a BO on the impacts of FERC's issuance of a permit for the proposed dredging and pipelaying portion of the Millennium Pipeline Project on endangered shortnose sturgeon. Following the conclusion of the formal consultation, NMFS was informed in a letter dated January 23, 2002, from Sidley Austin Brown and Wood that blasting may be required to complete the pipeline installation. Information indicating that blasting may be necessary during pipeline construction was not included in the initiation package (i.e., the biological assessment or Supplemental Draft Environmental Impact Statement). Therefore, an analysis on the effects of blasting on endangered shortnose sturgeon was not included in NMFS' BO. Pursuant to section 7 of the ESA, reinitiation of consultation is required if project plans are modified in a way that causes an effect to the listed species not previously considered in preparation of the BO.

In a letter dated July 3, 2002, FERC requested reinitiation of formal consultation on the blasting portion of the Millennium Pipeline Project. In this letter, FERC enclosed a supplemental BA and two blasting mitigation plans prepared by Vibra-Tech Engineers, Inc. and Lawler, Matusky, and Skelly Engineers LLP. NMFS has reviewed the supplemental BA and blasting mitigation plans and offers the following comments on the effects of blasting on endangered shortnose sturgeon.

Endangered shortnose sturgeon occur in the Hudson River from approximately New York City to the Troy Dam. Both adults and juveniles have been found to use Haverstraw Bay for summer foraging and/or overwintering. From late fall to early spring adult shortnose sturgeon overwinter in dense aggregations. Reproductive activity the following spring determines overwintering behavior; non-spawning adults aggregate in and/or near Haverstraw Bay, while spawning adults concentrate near Kingston. Most juveniles occupy the broad region of Haverstraw Bay by late fall and early winter (Buckley and Kynard 1985, Dovel et al. 1992, Bain et al. 1998). Therefore, both adult and juvenile shortnose sturgeon have the potential to be in the area during blasting and may be adversely affected.

A number of studies have examined the effect of underwater blasting on fish and have concluded that blasting does have an adverse impact. Results from previous blasting studies conducted on 13 species of fish revealed that swimbladder rupture and hemorrhaging in the pericardial and coelomic cavities were common injuries (Wiley et al., 1981). While shortnose sturgeon were not the focus of these studies, the results can be used to predict the impact of blasting on shortnose sturgeon given there are certain factors that influence both the magnitude of the blast and the explosion pressure wave. Teleki and Chamberlain found that the magnitude of the blasting effect on fish is dependent upon several physical and biological characteristics. Physical components include detonation velocity, density of material to be blasted, and charge weight. Fish shape, swimbladder development, and location of the fish in the water column represent influential biological characteristics. The explosion pressure wave and resultant fish kill is influenced by the interaction of additional physical components including the composition of the explosive, water depth, and bottom composition (Teleki and Chamberlain, 1978).

In order to assess the impacts of blasting on shortnose sturgeon, in December of 1998 and January of 1999 test blasting was conducted in Wilmington Harbor. The results of this study demonstrated that while shortnose sturgeon do suffer from swimbladder ruptures, more common

were distended intestines with gas bubbles inside and hemorrhage to the body wall lining. Necropsies were only preformed on approximately 70 shortnose sturgeon that were 35 feet from the blast; the group located 70 feet from the blast were externally examined. It was later concluded that the external examinations were insufficient in identifying all blast related injuries given that necropsies preformed later revealed serious internal damage. While it is evident that shortnose sturgeon can withstand a certain degree of blasting at certain distances from detonation, it is also apparent that blasting does have the potential to cause serious injury (Moser, 1999).

A list of measures to minimize the impact of blasting on shortnose sturgeon have been incorporated into the project application, following a series of correspondence between NMFS and FERC (i.e., letters February 15, 2002, July 3 2002, e-mail July 25, 2002, and August 1, 2002). NMFS has reviewed these measures and incorporated additional recommendations in order to avoid the potential take of shortnose sturgeon:

> Pre- and post blast monitoring for shortnose sturgeon shall be conducted under the supervision of a NMFS approved observer with the use of side-scan sonar.
> Side-scan sonar should be used 20 minutes before the blast to detect the presence of schools of fish in the vicinity of blasting. The surveillance zone will be approximately circular with a radius of about 500 feet extending outward the entire length of the trench.
> Scare charges should be used shortly before blasting is undertaken. Each individual scare charge shall not exceed a TNT-equivalent weight of 0.1 lb. The detonation of the first charge will be at 45 seconds prior to blasting and the second scare charge should be detonated 30 seconds prior to blasting. Side-scan sonar should be used following the detonation of scare charges to ensure that schools of fish have moved out of the vicinity of blasting. If monitoring indicates fish are still present in the area, blasting activities should be delayed.
> Blasting will be confined to a single episode, rather than multiple blast events.
> Detonation of explosives will be separated by a minimum of a 25 millisecond time lag and 1-2 drill holes will be set per time delay. Minimizing the number of holes detonated per time delay will minimize the total pressure generated from the blast, given that the maximum overpressure produced will be related to the size of the charge per delay rather than the summation of all charges.
> All blast holes will be stemmed to suppress the upward escape of blast pressure from the drill hole. Stemming will be 3-7 feet thick, depending on the depth of the drill hole, and will use graded, clean crushed stone that is 3/8" or 1/4."
> The minimum charge necessary should be used per delay and a maximum charge weight of 35 lbs will be used per delay. Blasting pressure should be monitored.
> Blasting should be conducted within the originally agreed upon construction window of September 1-November 15.

NMFS has concluded that if Millennium finds that blasting is required to complete the pipeline construction along the 185 feet easternmost portion of the crossing, it is not likely to adversely affect the endangered shortnose sturgeon, provided that recommended measures discussed above are used to reduce the potential for take. Provided these measures are used, no further

consultation is required. However, if any of these measures are not employed, then it is our determination that this portion of the proposed project may affect the endangered shortnose sturgeon, and reinitiation of formal consultation under the ESA will be required.

The above determination has been made using the best available scientific and commercial information. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of taking specified in the incidental take statement is exceeded; (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) the identified action is subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in this biological opinion; or (4) a new species is listed or critical habitat designated that may be affected by the identified action. In instances where the amount or extent of incidental take is exceeded, section 7 consultation must be reinitiated immediately.

NMFS Magnuson-Stevens Act, Essential Fish Habitat Comments

In January, 2001, FERC submitted an EFH assessment and request for consultation pursuant to the MSA. The assessment would be for construction activities proposed in Haverstraw Bay in the Hudson River, New York. On March 22, 2001, NMFS responded to FERC's EFH assessment with 1) a summary of concerns related to the ecological effects that would be incurred by constructing the proposed river crossing, and 2) EFH conservation recommendations pursuant to Section 305(b)(4)(A) of the MSA. Subsequently, NMFS was informed that blasting may be required in a portion of Haverstraw Bay to complete project installation. Information describing the proposed blasting and its impacts on the Haverstraw Bay habitat was not included in the initial EFH assessment or supplemental draft environmental impact statement. NMFS received FERC's supplemental EFH assessment on July 8, 2002. This assessment included attachments produced by Vibra-Tech Engineers, Inc. and Lawler, Matusky, and Skelly Engineers.

This supplemental EFH assessment was prepared by FERC to evaluate the impacts that would result from underwater blasting in a portion of the Haverstraw Bay alignment alternative, which was not considered in the original EFH assessment. Supplemental consultation is necessary since the original EFH assessment was submitted because the applicant has determined that mechanical means alone would not likely succeed in establishing the trench necessary for the pipe to complete a portion of the proposed river crossing. NMFS has reviewed the supplemental EFH assessment and offers the following comments and conservation recommendations pursuant to Section 305(b)(4)(A) of the MSA and Part IV, Paragraph 3(b) of the Clean Water Act MOA between NMFS and the Army Corps of Engineers (ACOE).

The supplemental EFH assessment and attachments indicate that the underwater blasting would be confined to the easternmost 185 feet of the proposed Haverstraw Bay crossing. The assessment includes a general blasting plan and proposed mitigative measures as referred to in the Revised Blasting Plan section of this letter. We offer the following comments and recommendations on the supplemental EFH assessment pursuant to the MSA. These comments and recommendations address incremental impacts associated with the addition of a blasting

component for construction of the project through the Haverstraw Bay alignment alternative. The conservation recommendations issued for this action complement those already on record for the ongoing EFH consultation as stated in our letter to FERC on March 22, 2001, and under consideration by FERC .

Project details discussed in FERC's supplemental EFH assessment address the effects of underwater blasting within a segment of the pipeline corridor from the eastern shore to a point 185 feet offshore in Haverstraw Bay. The assessment includes discussion of EFH impacts from the blasting and subsequent removal of rock material; effects on the original project footprint established in the initial assessment and on the original proposed construction schedule; management of rock and sediment spoils; and blasting procedures and protocols. Mitigation methods are also discussed (see Revised Project Description). We understand from this discussion that overlying soft material on the bay bottom would be removed as described in the initial EFH assessment and stored in shallow draft barges, and sidecasting would be prohibited. Further, setback distance for removing the rock and soft sediment, although determined in the field, would be within the limits of the setback project corridor described in the original EFH assessment for this crossing. Moreover, blasting would occur only when mechanical methods fail, and the project schedule would not be affected.

We note that Millennium proposes to accomplish the blasting in a single episode, but the Vibra-Tech attachment indicates that more than one episode may be necessary due to barge access limitations. The EFH assessment acknowledges that the cumulative effects of multiple blasts would exceed the effect of the planned, single blasting episode. Further, it would not be possible to restore the benthic habitat fully since the fractured bedrock could not be returned to its pre-construction condition. The supplemental EFH assessment acknowledges that some unavoidable changes would accrue to EFH where bedrock areas would be permanently disturbed.

Regarding the application of the mitigative measures using noise-generating fish deterrent and an air bubble curtain, we have concern about the I-Blast model inputs. The air bubble curtain would be installed within the 96 hour 1% mortality distance based on the Coastline Environmental Service's I-Blast model (assuming a 35 pound high explosive charge and fish weighing between 0.25 and 15 pounds). We agree that the acoustic deterrents may discourage these fish from nearing the immediate blasting zone and that a properly designed bubble curtain would attenuate wave pressures created by the subaqueous blasting. However, we believe that assumptions used in the I-blast model do not account for potential impacts on outmigrating alosids, which will be smaller than 0.25 pounds, and that the present air curtain design will not provide protection for these fish. In this regard, the I-Blast model should be rerun to ensure that it will account for protection of alosids smaller than 0.25 pounds.

As indicated in the initial EFH assessment for this project, EFH is present in Haverstraw Bay for six species regulated under the MSA for the blasting component under review: red hake (*Urophysis chuss*), winter flounder (*Pseudopleuronectes americanus*), windowpane (*Scopthalmus aquosus*), bluefish (*Pomatomus saltatrix*), Atlantic butterfish (*Peprilus triacanthus*), and fluke (*Paralichthys dentatus*). The revised pipeline installation requiring blasting for the easternmost 185 feet of the Haverstraw Bay crossing would adversely affect EFH

primarily by disturbing natural sediment structure, by resuspending contaminants, by dispersing or destroying forage species, by altering shallow subtidal habitats, by changing the natural shoreline development, and by fracturing the bedrock formation at the east shore of Haverstraw Bay. NMFS recommends pursuant to Section 305(b)(4)(A) of the MSA and Part IV, Paragraph 3(b) of the Clean Water Act MOA between NMFS and the ACOE the following conservation recommendations:

> The I-Blast model should be repeated to determine if the bubble curtain perimeter needs revision in order to provide the additional 1% mortality protection for all size classes of outmigrating alosids, an important forage species for many species for which EFH has been designated in the Hudson River estuary and beyond.
> In the event that a school of fish is present in the blasting zone and remains undeterred by noise-generating devices, blasting must be delayed until the fish move outside of the calculated impact area. The decision to proceed must be approved immediately in advance by the independent environmental monitor or designated personnel from the involved state or federal regulatory agencies.
> Provide NMFS with an actual blasting plan as soon as it is developed by the contractor for final agency review. This plan should be designed to achieve the necessary fracturing in one episode and in a manner to minimize the resulting physical and biological impacts. We also request that our staff be given a minimum of 48 hours notice prior to any detonation taking place so agency observers may be deployed if it is determined necessary or desirable upon review of the final plan.
> All fish kills and habitat damage that exceed the very limited area of impact characterized in the supplemental EFH assessment must be compensated based on suitable replacement values or formulas.

Section 305(b)(4)(B) of the MSA requires the involved federal authorizing and funding agencies to provide NMFS with a detailed written response to these EFH conservation recommendations, including a description of measures adopted by FERC and ACOE for avoiding, mitigating, or offsetting the impact of the project on EFH. In the case of a response that is inconsistent with NMFS' recommendations, FERC and/or the ACOE must explain its reasons for not following the recommendations, including the scientific justification for any disagreements with NMFS over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate, or offset such effects pursuant to 50 CFR 600.920(k).

If new information becomes available or the project is revised in such a manner that affects the basis for the above EFH conservation recommendations, the EFH consultation must be reinitiated pursuant to 50 CFR 600.920(l).

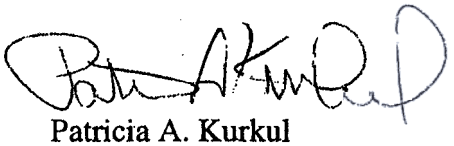
Conclusions

We offer the above recommendations in response to a change in scope for this project. We recommend that FERC and the ACOE (as appropriate) require that the project proponents revise their proposed blasting plan to avoid and minimize negative impacts on living marine resources and habitats in accordance with Section 7 and EFH conservation recommendations. We continue

to maintain our recommendations issued on the overall project proposal as presented in previous correspondence to the FERC Secretary and to the ACOE and look forward to your response to EFH conservation recommendations issued on March 22, 2001, and existing ESA matters.

If you have questions concerning these comments or consultation requirements, please contact Jessica Anthony at 978-281-9254 for ESA matters, and Diane Rusanowsky at 203-882-6504 for EFH matters. I look forward to continued cooperation with FERC through in this consultation process.

Sincerely,



Patricia A. Kurkul
Regional Administrator

cc: USACE - Buffalo, New York, Albany Field Office
USFWS - Cortland
NYSDEC - Albany
NYSDOS - Cortland
NMFS - Anthony, Mantzaris, K. Conant, Colligan, Colosi, Gorski, Rusanowsky, Hogarth, Kurkul
GCNE - Williams
ACOE - Heidi Firstencel
FERC - Jeff Shenot/Gas Branch 2, PJ-11.2

File Code: 1514-05 (A) FERC - Millennium Pipeline Project (blasting)

Literature Cited

Bain, M.B., D.L. Peterson, K.K. Arend. 1998. Population Status of Shortnose Sturgeon in the Hudson River. Final Report to the National Marine Fisheries Service. October 1998, 51pp.

Buckley, J., and B. Kynard. 1985. Habitat use and behavior of pre-spawning and spawning shortnose sturgeon, *Acipenser brevirostrum*, in the Connecticut River. North American Sturgeons. Pages 111-117.

Dovel, W.L., A.W. Pekovitch, and T.J. Berggren. 1992. Biology of the shortnose sturgeon (*Acipenser brevirostrum* Leseur, 1818) in the Hudson River estuary, New York. Pages 187-216 in C.L. Smith (editor), Estuarine research in the 1980s. State Univ. New York Press, Albany, New York.

Moser, M. 1999. Cape Fear River Blast Mitigation Test: Results of Caged Fish Necropsies. Final Report to CZR Inc., 4709 College Acres Drive, Wilmington, NC 28403.

Teleki, G.C. and A.J. Chamberlain. 1978. Acute effects of underwater construction blasting on fishes in Long Point Bay, Lake Erie. J. Fish. Res. Board Can., Vol 35: 1191-1198.

Wiley, M.L., J.B. Gaspin, and J.F. Goertner. 1981. Effects of Underwater Explosions on Fish with a Dynamical model to Predict Fishkill. Vol 6(2): 223-284.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
One Blackburn Drive
Gloucester, MA 01930-2298

MAR 22 2001

In Reply To:
OEP/DEER/Gas 2
Millennium Pipeline Company, L.P.
Docket Nos. CP98-150 et al., and
Columbia Gas Transmission Company,
Docket No. CP98-151-000

Mr. Richard R. Hoffman
Leader, Gas Group 2
Federal Energy Regulatory Commission
Office of Energy Projects
Washington, D.C. 20426

Dear Mr. Hoffman:

This acknowledges your request for an essential fish habitat (EFH) consultation pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) for the subject project. I have limited my comments to the Federal Energy Regulatory Commission's (FERC) EFH assessment and to the Haverstraw Bay option addressed in that document. This supercedes our fax transmission on this subject sent on March 21, 2001. This letter is identical to the fax version except that it includes procedures to respond to the conservation recommendations.

We are able to only partially review the EFH assessment since it did not address alternatives that could avoid or minimize adverse effects on EFH. Although the assessment states that alternatives were analyzed and rejected, it failed to incorporate those analyses. That information is vital to the assessment process. It would enable us to evaluate the relative impacts of alternative river crossings to determine if the least damaging practicable alternative can be identified. I offer the following comments and conservation recommendations in the interim.

Of the 59 species for which EFH has been designated in waters of the northeastern U.S., FERC's review disclosed that EFH is present in Haverstraw Bay for six of these species: red hake

(*Urophysis chuss*), winter flounder (*Pseudopleuronectes americanus*), windowpane flounder (*Scopthalmus aquosus*), bluefish (*Pomatomus saltatrix*), Atlantic butterfish (*Peprilus triacanthus*), and fluke (*Paralichthys dentatus*). We agree with FERC's determination that this is an accurate species list for EFH designated in Haverstraw Bay and the Croton River Bay area.

As described in the EFH assessment, the Haverstraw Bay option may negatively impact both managed species and EFH. The crossing areas were provided special ecological status when New York designated the area a Significant Coastal Fish and Wildlife Habitat pursuant to the Coastal Zone Management Act, and the U.S. Fish and Wildlife Service designated the area as a Significant Habitat Complex of the New York Bight Watershed. This productive estuary area is a regionally significant nursery and wintering habitat area for a number of anadromous and estuarine fish species, including the endangered shortnose sturgeon and the Atlantic sturgeon.

According to the applicant, the width of the river at Haverstraw Bay precludes directional drilling and leaves dredging as the only viable option. In its EFH assessment, FERC acknowledges that the project will cause temporary adverse impacts by using a closed bucket dredge, placing and moving anchors and barge spuds, laying pipe, and backfilling the trench. The assessment characterizes these as temporary disturbances to water quality and the riverbed. We agree with the conclusions in the assessment that sediments suspended during the trench cutting, pipe-laying, and backfilling operations have a habitat-degrading effect. However, we are concerned that those impacts will not be short-lived and limited to temporary resuspension of unconsolidated material, localized deposition, and resuspension of contaminants. Pipeline installation via dredging will affect vital ecological functions in Haverstraw Bay and will cause adverse effects on aquatic resources in areas downstream. These effects, particularly indirect and cumulative effects, should be fully discussed in FERC's assessment.

Our primary concerns with the lay barge technique are with impacts to sediments and associated species. For example, our experience with other utility crossings in the Hudson River and elsewhere indicate that crossings cause benthic disturbances that take much longer than anticipated to recover, if recovery takes place at all. This is an important consideration for EFH because the proposed dredging would constitute new work in healthy river bottom habitat. Similarly, given the normal distribution patterns of fish in the Hudson River, it is logical to assume that motile life stages will be affected during project construction. Organisms that may be smothered by the plume of material suspended during dredging should be considered in the EFH assessment. Modeling to estimate the areal extent of EFH impacts did not include important technical considerations, such

as resuspension, that influence plume behavior and impacts. Since the surface plume is not representative of the near-bottom situation (and the "environmental" bucket produces a denser resuspension cloud near the bottom), we suspect that the model underestimates the actual ecological impacts from increased turbidity and deposition near the dredge area. Models also should include damage to shallow waters from barges grounding at lower tidal stands, and similar effects. The EFH assessment proposes to use silt curtains to mitigate resuspension impacts. We have reservations concerning this technique, given that sediments will tend to concentrate within the silt curtains and exacerbate near-bottom impacts.

The Croton River and Bay crossing area portion of the project may offer some alternatives to dredging, with fewer habitat concerns to EFH. Horizontal directional drilling from upland points of entry and exit is preferred in sensitive aquatic habitats because disturbances to the water column, unconsolidated bottom material, and benthic assemblage generally can be avoided. The major exception to this preference is when local geology is unsuitable for containing drill muds and cuttings during the boring, or if the length of the drilling reduces the likelihood for success. A detailed survey should certify that local geology is not susceptible to fractures or instabilities that could complicate directional drilling. If drilling proves problematic, an alternative corridor through this project reach should be investigated.

Finally, I would like to address the alternative construction window proposed in the EFH assessment. Under the proposal, dredging would be undertaken from August 1 to October 31. As we have indicated in previous coordination, there is no good time to conduct extensive dredging in Haverstraw Bay since the proposed alignment would pass through habitats used by every species listed on Table 3-2 of the EFH assessment. A construction window that would permit work in August has the potential to impact life stage and habitat needs of many species, including special concern species such as the endangered shortnose sturgeon and the Atlantic sturgeon. In balancing the needs of our various species of concern, we conclude that an acceptable window for dredging would be from September 1 to November 15 at Haverstraw Bay.

Pursuant to Section 305(b)(4)(A) of the Magnuson-Stevens Act, I recommend, based upon the limited information provided in the EFH assessment, that FERC fully investigate alternatives to the Haverstraw Bay alignment that would minimize adverse effects on EFH and other resources. I also recommend that FERC conduct a more rigorous analysis to compare the effects of different Hudson River crossing alignments on EFH. The Magnuson-Stevens Act requires that FERC provide NMFS with a written response to these conservation recommendations, including measures adopted by the action agency to avoid, minimize, mitigate, or offset adverse effects.

Since the SDEIS was not available for consideration in the development of the above conservation recommendations, NMFS or FERC may reinitiate consultation pursuant to 600.920(k). Such consultation may be reinitiated if the SDEIS provides new or additional information that affects the basis for the above conservation recommendations. For example, if the analysis shows that the Haverstraw Bay alignment is the only practicable alternative, consultation can be reinitiated and the EFH conservation recommendations can be revised, as appropriate.

I look forward to your response and to our continued coordination with FERC on this and other projects. I am willing to meet with you to discuss our concerns. If you have any questions about this matter or about EFH in general, please call Ms. Diane Rusanowsky of my staff at 203-579-7071.

Sincerely,

for Patricia A. Kurkul
Regional Administrator

cc: F/NER4 - Sandy Hook, Milford
Office of Habitat Conservation
USACE - Buffalo, NY
NYSDOS
NYSDEC - Albany

triacanthus), and fluke (*Paralichthys dentatus*). We agree with FERC's determination that this is an accurate species list for EFH designated in Haverstraw Bay and the Croton River Bay area.

As described in the EFH assessment, the Haverstraw Bay option may negatively impact both managed species and EFH. The crossing areas were provided special ecological status when New York designated the area a Significant Coastal Fish and Wildlife Habitat pursuant to the Coastal Zone Management Act, and the U.S. Fish and Wildlife Service designated the area as a Significant Habitat Complex of the New York Bight Watershed. This productive estuary area is a regionally significant nursery and wintering habitat area for a number of anadromous and estuarine fish species, including the endangered shortnose sturgeon and the Atlantic sturgeon.

According to the applicant, the width of the river at Haverstraw Bay precludes directional drilling and leaves dredging as the only viable option. In its EFH assessment, FERC acknowledges that the project will cause temporary adverse impacts by using a closed bucket dredge, placing and moving anchors and barge spuds, laying pipe, and backfilling the trench. The assessment characterizes these as temporary disturbances to water quality and the riverbed. We agree with the conclusions in the assessment that sediments suspended during the trench cutting, pipe-laying, and backfilling operations have a habitat-degrading effect. However, we are concerned that those impacts will not be short-lived and limited to temporary resuspension of unconsolidated material, localized deposition, and resuspension of contaminants. Pipeline installation via dredging will affect vital ecological functions in Haverstraw Bay and will cause adverse effects on aquatic resources in areas downstream. These effects, particularly indirect and cumulative effects, should be fully discussed in FERC's assessment.

Our primary concerns with the lay barge technique are with impacts to sediments and associated species. For example, our experience with other utility crossings in the Hudson River and elsewhere indicate that crossings cause benthic disturbances that take much longer than anticipated to recover, if recovery takes place at all. This is an important consideration for EFH because the proposed dredging would constitute new work in healthy river bottom habitat. Similarly, given the normal distribution patterns of fish in the Hudson River, it is logical to assume that motile life stages will be affected during project construction. Organisms that may be smothered by the plume of material suspended during dredging should be considered in the EFH assessment. Modeling to estimate the areal extent of EFH impacts did not include important technical considerations, such as resuspension, that influence plume behavior and impacts. Since the surface plume is not representative of the near-bottom situation (and the "environmental" bucket produces a denser

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
One Blackburn Drive
Gloucester, MA 01930-2298

March 21, 2001

In Reply To:
OEP/DEER/Gas 2
Millennium Pipeline Company, L.P.
Docket Nos. CP98-150 et al., and
Columbia Gas Transmission Company,
Docket No. CP98-151-000

Mr. Richard R. Hoffman
Leader, Gas Group 2
Federal Energy Regulatory Commission
Office of Energy Projects
Washington, D.C. 20426

Dear Mr. Hoffman:

This acknowledges your request for an essential fish habitat (EFH) consultation pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) for the subject project. I have limited my comments to the Federal Energy Regulatory Commission's (FERC) EFH assessment and to the Haverstraw Bay option addressed in that document.

We are able to only partially review the EFH assessment since it did not address alternatives that could avoid or minimize adverse effects on EFH. Although the assessment states that alternatives were analyzed and rejected, it failed to incorporate those analyses. That information is vital to the assessment process. It would enable us to evaluate the relative impacts of alternative river crossings to determine if the least damaging practicable alternative can be identified. I offer the following comments and conservation recommendations in the interim.

Of the 59 species for which EFH has been designated in waters of the northeastern U.S., FERC's review disclosed that EFH is present in Haverstraw Bay for six of these species: red hake (*Urophysis chuss*), winter flounder (*Pseudopleuronectes americanus*), windowpane flounder (*Scopthalmus aquosus*), bluefish (*Pomatomus saltatrix*), Atlantic butterfish (*Peprilus*

that the Haverstraw Bay alignment is the only practicable alternative, consultation can be reinitiated and the EFH conservation recommendations can be revised, as appropriate

I look forward to your response and to our continued coordination with FERC on this and other projects. I am willing to meet with you to discuss our concerns. If you have any questions about this matter or about EFH in general, please call Ms. Diane Rusanowsky of my staff at 203-579-7071.

Sincerely,

for Patricia A. Kurkul
Regional Administrator

cc: F/NER4 - Sandy Hook, Milford
Office of Habitat Conservation
USACE - Buffalo, NY
NYSDOS
NYSDEC - Albany

resuspension cloud near the bottom), we suspect that the model underestimates the actual ecological impacts from increased turbidity and deposition near the dredge area. Models also should include damage to shallow waters from barges grounding at lower tidal stands, and similar effects. The EFH assessment proposes to use silt curtains to mitigate resuspension impacts. We have reservations concerning this technique, given that sediments will tend to concentrate within the silt curtains and exacerbate near-bottom impacts.

The Croton River and Bay crossing area portion of the project may offer some alternatives to dredging, with fewer habitat concerns to EFH. Horizontal directional drilling from upland points of entry and exit is preferred in sensitive aquatic habitats because disturbances to the water column, unconsolidated bottom material, and benthic assemblage generally can be avoided. The major exception to this preference is when local geology is unsuitable for containing drill muds and cuttings during the boring, or if the length of the drilling reduces the likelihood for success. A detailed survey should certify that local geology is not susceptible to fractures or instabilities that could complicate directional drilling. If drilling proves problematic, an alternative corridor through this project reach should be investigated.

Finally, I would like to address the alternative construction window proposed in the EFH assessment. Under the proposal, dredging would be undertaken from August 1 to October 31. As we have indicated in previous coordination, there is no good time to conduct extensive dredging in Haverstraw Bay since the proposed alignment would pass through habitats used by every species listed on Table 3-2 of the EFH assessment. A construction window that would permit work in August has the potential to impact life stage and habitat needs of many species, including special concern species such as the endangered shortnose sturgeon and the Atlantic sturgeon. In balancing the needs of our various species of concern, we conclude that an acceptable window for dredging would be from September 1 to November 15 at Haverstraw Bay.

Pursuant to Section 305(b)(4)(A) of the Magnuson-Stevens Act, I recommend, based upon the limited information provided in the EFH assessment, that FERC fully investigate alternatives to the Haverstraw Bay alignment that would minimize adverse effects on EFH and other resources. I also recommend that FERC conduct a more rigorous analysis to compare the effects of different Hudson River crossing alignments on EFH.

Since the SDEIS was not available for consideration in the development of the above conservation recommendations, NMFS or FERC may reinitiate consultation pursuant to 600.920(k). Such consultation may be reinitiated if the SDEIS provides new or additional information that affects the basis for the above conservation recommendations. For example, if the analysis shows

foot-wide ROW at certain stream crossings. Millennium has proposed hiring an environmental inspector for assuring that construction activities are performed in accordance with environmental conditions of the Construction Alignment Sheet and the Environmental Construction Standards. If the project is permitted, we suggest an independent inspector who reports to the state and federal regulatory agencies would be preferred to avoid potential conflicts of interest.

Project Setting and Impacts:

The proposed alignment for this project traverses a variety of ecological settings ranging from upland to lacustrine, palustrine, riverine, and estuarine systems. These areas are held in a variety of private and public uses including open water, forest, wetlands, and tracts used for agricultural, residential, commercial, and industrial purposes. The applicant has indicated that a total of 296 perennial and 195 intermittent waterbodies would be crossed and estimated that 422 acres of wetlands would be disturbed during construction.

Wetlands: Along the pipeline alignment, the applicants generally propose to create a 75-foot-wide construction ROW, with additional width required in agricultural land and at stream, wetland, road, and railroad crossings. Typically, a 50-foot ROW would be maintained post construction for the life of the project. While a portion of the cleared area is proposed to be restored to existing wetland community types, other parts of the ROW would be converted and maintained to different habitat types. We note that these changes would result in *permanent* impacts to wetland values and functions and that Millennium has not proposed any compensatory mitigation for these impacts. Given the hundreds of acres that potentially would be affected by the proposed construction activities, it is important that 1) sensitive habitats be avoided to the fullest extent practicable, and 2) project routing and design ensure that appropriate wetland values and functions are maintained. For projects of this nature, mitigation may not be able to be provided on site. As a general rule, any mitigation developed for this project should be undertaken in the same watershed as close as feasible to the impacted area and designed to replace the functions and values of those lost or impaired as a consequence of the construction activity. The State and Federal resource agencies should be consulted to evaluate mitigation projects developed for this purpose.

In addition, field verification is necessary to clarify the extent and nature of wetland impacts. Unfortunately, the ACOE has not verified the delineation for these wetlands and made a final determination of the proposed impacts. Without an accurate delineation and final determination of the amount, location, and type of wetlands that would be impacted by project construction, it is not possible for the ACOE or involved resource agencies to ensure that our mutual responsibilities under the Clean Water Act have been met with the present project design. Along these lines, we make reference to the US Environmental Protection Agency's recent correspondence to you (dated March 30, 2000) which 1) questioned whether wetland impacts have been adequately avoided and minimized for the present proposal, and 2) concluded that the proposed project "...failed to demonstrate compliance with the Clean Water Act Section 404(b)(1) Guidelines..." and would "...have a substantial and unacceptable impact on aquatic resources of national importance." We

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
One Blackburn Drive
Gloucester, MA 01930-2298

MAY - 2 2000

Lt. Colonel Mark D. Feierstein
District Engineer
Department of the Army
1776 Niagara Street
Buffalo, New York 14207

Dear I Colonel Feierstein

This letter is in response to an application by Millennium Pipeline Company, LP (Millennium) for a permit to install structures and to discharge fill into waters of the US. The stated purpose is to construct an underground pipeline for conveying natural gas for commercial sale. The project is proposed to run from Lake Erie at the border between the United States and Canada and subsequently to extend south to Mount Vernon, Westchester County, New York. Our assessment of the available information indicates that construction of the proposed design would have substantial and unacceptable impacts on aquatic resources. As a consequence, we recommend that authorization be denied.

Proposed Action:
A project description for the proposed activities is provided in a Public Notice advertized jointly by the U.S. Army Corps of Engineer (ACOE) Districts in Buffalo, New York and Pittsburgh under processing numbers 97-320-0003(2), 1999-00640, and 199701186, respectively. If constructed as presently proposed, the pipeline would begin at the US-Canada border at an interconnection with TransCanada Pipelines, LTD. in Lake Erie to landfall near Ripley, Chautauqua County, New York. The route would then continue across 11 southern New York counties (Chautauqua, Cattaraugus, Alleghany, Steuben, Chemung, Tioga, Broome, Delaware, Sullivan, Orange, and Rockland) to the west bank of the Hudson River at the Town of Haverstraw; cross Haverstraw Bay; make landfall at the Town of Cortland; and terminate at Mount Vernon, Westchester County, New York.

According to the Public Notice, a 36-inch mainline is proposed for 373 miles between the US-Canada border to Ramapo, New York. The remaining 44 miles have been proposed as a 24-inch mainline between Ramapo and Mount Vernon, New York. Meter stations and block valves would be constructed at several locations along the pipeline. The applicant would acquire existing pipeline facilities from the Columbia Gas Transmission Corporation and operate them as part of the new pipeline system (this would include seven miles of 24-inch diameter pipeline between Ramapo and Clarkstown, New York that would be used for the new mainline system), and various laterals and appurtenant aboveground facilities in New York and Pennsylvania. Approximately 86 percent of the on-land pipeline would be constructed in or adjacent to existing right-of-way (ROW). Typical construction would occupy a 75-foot ROW and as much as a 200-

the Hudson River crossing would create a direct loss of habitat for these species and subject them to increased mortality.

In the April through July period, spawning adults of many different genera move into Haverstraw Bay, with non-motile eggs and embryos being deposited and pelagic larvae occurring in increasing numbers as the season progresses. Accordingly, physical and chemical impacts related to construction would constitute a progressive increase of impacts to highly sensitive age groups. In the summer (July through September), physical disturbances to the habitat and forage base would affect key food chain relationships, influence dissolved oxygen levels, and otherwise reduce the ecological ability of the habitat to support species of concern through their recovery period.

The September through mid-November time frame seems to be the least ecologically sensitive period since the fish assemblage tends to be more motile and capable of avoidance behaviors that reduce their risk of harm. Therefore, until water temperatures reach the critical threshold that initiates overwintering behaviors, these biota would be less likely to suffer significant mortality caused by physical disturbances. However, they would experience some level of impairment in terms of access to their forage base and perhaps for shelter opportunities.

As indicated above, direct construction impacts would be unacceptable for much of the year. At the request of the Federal Energy Regulatory Commission, we recently identified that construction activities that meet other regulatory considerations could be permitted in Haverstraw Bay between September and mid-November, provided that mitigative measures identified during the permitting process were in place. However, until such mitigative measures are in place, we continue to recommend that the activity be avoided in Haverstraw Bay altogether.

Haverstraw Bay also has been acknowledged by the New York Coastal Management Program (NYCMP) as one of the most important fish and wildlife habitats in the Hudson River Estuary. This special status is formally recognized by New York's designation of the area as a Significant Coastal Fish and Wildlife Habitat pursuant through New York State Law and the Federal Coastal Zone Management Act. The National Oceanic and Atmospheric Administration (NOAA) concurs with this designation. The New York Coastal Fish and Wildlife rating form and narrative for the state designation of the Haverstraw Bay habitat details the basis for this designation and includes the NYCMP's conclusion that this habitat is irreplaceable. We concur with the NYCMP analysis and findings.

The narrative for the Haverstraw Bay significant coastal fish and wildlife habitat also provides that: "Any physical modification of the habitat or adjacent wetlands, through dredging, filling or bulkheading, would result in a direct loss of valuable habitat area." New dredging does not meet the habitat impairment test criteria established by the NYCMP for this site and we cannot support the selected pipeline alignment and installation technique because it would produce unacceptable and avoidable impacts to aquatic resources, including endangered and other special concern species. As we have indicated on previous occasions, an out-of-Bay, less damaging alignment should be pursued if a crossing of the Hudson River is necessary or appropriate. We are

share their concern on this issue and raise downstream impacts to water quality and aquatic life as a fundamental matter to be resolved before a final permit decision is made.

In addition to generic wetland considerations, we would like to present critical issues that arose when we first became aware of the Millennium proposal. Despite discussions and negotiations among the applicant and involved agencies in various forums, these significant concerns remain to be resolved.

Hudson River Crossing: The Public Notice describes a proposed crossing with a 24-inch diameter pipeline from Bowline Point in Haverstraw, Rockland County to the Veterans' Administration Hospital in Cortland, Westchester County, New York. This crossing is proposed in the Haverstraw Bay reach of the Hudson River. The distance of the proposed crossing is approximately 2.2 miles. The applicant has previously certified that the use of horizontal directional drilling techniques that might otherwise avoid significant ecological impacts is not technically feasible. Instead, the applicant proposes to bury the pipeline within a trench excavated in the river bottom and banks. A lay barge crossing method would be used to assemble and place the pipe. Material dredged to form the trench would be stored on barges and is proposed as subsequent backfill. Based upon our experience with subaqueous crossings for other pipeline projects in the Hudson River region and elsewhere, we expect that project construction would physically modify and significantly impair the Haverstraw Bay habitat. This would occur to the detriment of aquatic resources, including estuarine-dependent fisheries.

Haverstraw Bay is a productive estuary that provides regionally significant ecological values and functions for many species of concern, notably anadromous, estuarine, and certain marine species which use and are dependent upon Haverstraw Bay for spawning, nursery, feeding, and overwintering activities. This productive estuary area has been designated as a Significant Habitat of the New York Bight Watershed by the US Fish and Wildlife Service due to the regional significance of the ecological values it provides to fish, invertebrates, and other living resources. In particular, striped bass (*Morone saxatilis*), American shad (*Alosa sapidissima*), Atlantic tomcod (*Microgadus tomcod*), white perch (*Morone americana*), Atlantic sturgeon (*Acipenser oxyrhinchus*), bay anchovy (*Anchoa mitchilli*), shortnose sturgeon (*Acipenser brevirostrum*), blue crab (*Callinectes sapidus*), and bluefish (*Pomatomus saltatrix*) are among the biota of concern that use Haverstraw Bay extensively for essential ecological uses. These resources are managed under a variety of federal legislative actions, including the Fish and Wildlife Coordination Act, the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), the Emergency Striped Bass Act, the Coastal Zone Management Act, and the Endangered Species Act (ESA).

Habitat use of the Haverstraw Bay reach of the Hudson River by species of concern is extensive and complex. From December through March of any year, the Bay area is relatively quiet except for Atlantic tomcod reproductive activity. In addition to the most sensitive tomcod life stages, the habitat supports concentrated use by species such as striped bass, shortnose sturgeon, and Atlantic sturgeon for overwintering. The physiological demands of overwintering render fish extremely susceptible to habitat disturbances. Construction activities such as those proposed for

prepared to evaluate such alternative proposals for crossings outside of the Haverstraw Bay habitat that the project proponents find technically feasible.

ENDANGERED SPECIES ACT CONSIDERATIONS:

The endangered shortnose sturgeon (*Acipenser brevirostrum*) is the only endangered species under the jurisdiction of this agency that occurs in the project region. Shortnose sturgeon may be found in the Hudson River between the George Washington Bridge in Manhattan and the Federal Lock and Dam in Troy, New York.

Federal action agencies must consult with NMFS under Section 7 of the ESA about any action they authorize, fund, or carry out that may affect a listed species. The ESA further provides that, in consultation with NMFS, the federal action agency shall use its authority to further the purposes of the ESA to facilitate conservation and recovery of listed species and the ecosystems upon which they depend. During the consultation, "effects of the action" must be considered, including "...direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action...." Since shortnose sturgeon occur in the project vicinity, consultation pursuant to Section 7 of the ESA is necessary. We note that the issue of "take" as defined by the ESA is a critical issue that must be addressed in this situation. Since both the FERC and the ACOE are action agencies in this matter, you may choose to produce a joint biological assessment for this project. We would appreciate notification from your agency as to whether you will do so.

In addition to federally listed species, we note that Atlantic sturgeon (*Acipenser oxyrhinchus*), an anadromous fish that occurs in the Hudson River, is a candidate species that could be listed under the ESA in the future. Candidate species receive no mandatory federal protection; however, NMFS encourages Federal action agencies and others to protect these species. We will notify you if the status of this species changes before a final permit decision is reached in the event that additional coordination such as an ESA Section 7 conference (50 CFR § 402.10) for this species will be necessary.

ESSENTIAL FISH HABITAT CONSIDERATIONS:

Pursuant to Section 305(b)(2) of the MSFCMA, federal agencies are required to consult with NMFS regarding any action they authorize, fund, or undertake that may adversely affect Essential Fish Habitat (EFH). An adverse effect has been defined by the Act as follows: "Any impact which reduces the quality and/or quantity of EFH. Adverse effects may include direct (*e.g.*, contamination or physical disruption), indirect (*e.g.*, loss of prey, reduction in species' fecundity), site-specific, or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions."

The Hudson River crossing for this proposal may adversely affect EFH, particularly in Haverstraw Bay. Pursuant to the MSFCMA, the ACOE must consult with NMFS on this project, beginning with a written assessment of the effects of this project on EFH. Mandatory components of an EFH assessment include the following:

A detailed description of the proposed action

2 An analysis of the effects, including direct, indirect, and cumulative effects of the proposed action on EFH, the managed species, and associated species such as prey species, including affected life history stages

3 The Federal Agency's views regarding the effects of the action on EFH

4 Proposed mitigation, if applicable

Other information that should be incorporated into an EFH assessment, as appropriate, includes the results of on-site inspections to evaluate the habitat, the site-specific effects of the project, the views of recognized experts on the habitat or species affects, a review of the pertinent literature and related information, and an analysis of alternatives to the proposed action. Pursuant to Section 305(b)(4)(A) of the MSFCMA, NMFS will review the EFH assessment and provide the federal action agency with comments and EFH conservation recommendations as appropriate. Such recommendations may include measures to avoid, minimize, mitigate, or otherwise offset adverse impacts to EFH.

Additional information about EFH and the requirements of the MSFCMA can be found at our website at: http://www.nero.nmfs.gov/ro/doc/hcd.htm

Conclusion:
Thank you for considering these important issues. As indicated above, we are very concerned about the impacts that the present design will have on aquatic resources, including special concern species, harvested resources, forage species, and habitats. Constructing the present design for this project would incur an unacceptably high environmental cost and we must conclude that authorization will result in substantial and unacceptable impacts to aquatic resources of national importance. Accordingly, we recommend that your office not issue the permit. This letter is in accordance with Part IV, Paragraph 3(b) of the 1992 Clean Water Act Section 404(q) Memorandum of Agreement between our agencies.

As always, my staff is available to discuss these issues as your public interest review continues and the upcoming ESA and EFH consultations or other pertinent information are provided to assist in that review. We would especially appreciate your keeping us informed of the status of key project elements such as the wetland jurisdictional determination, development of a mitigation plan, and the Hudson River crossing so we can continue to participate in the pertinent discussions, negotiations, and consultations. Should you have any questions or wish to discuss this matter further, please contact Diane Rusanowsky at 203/579-7004.

Sincerely,

Patricia A. Kurkul
Regional Administrator

cc:	USACOE	Buffalo (M. Crawford)
	USACOE	Albany Field Office (H. Firstencel)
	FERC	Washington, DC
	F/NER4	Milford, Sandy Hook
	F/NER3	Gloucester
	USF&WS	Cortland
	USEPA	Region 2
	NYSDOS	Albany

millennium - 3(b)